

WHAT IS CLAIMED IS:

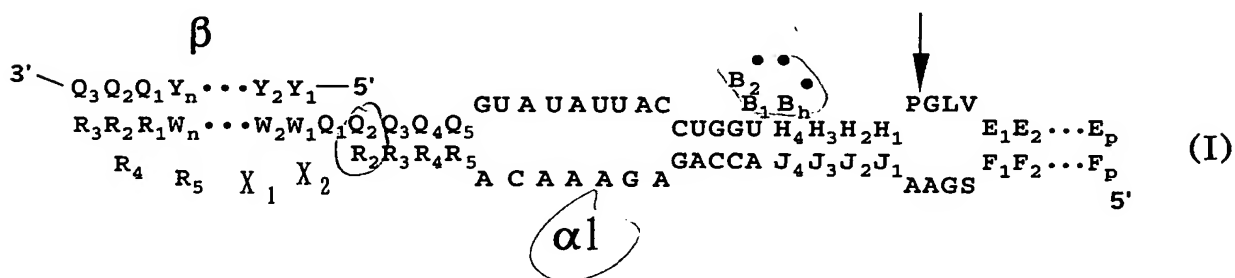
1. A hairpin ribozyme activated by changes in its stem-and-loop three-dimensional structure due to hybridization with an oligonucleotide.

2. The hairpin ribozyme according to claim 1, wherein the hybridization with an oligonucleotide is constituted by 3 to 23 base pairs.

3. The hairpin ribozyme according to claim 1, wherein the oligonucleotide is a part of a target nucleotide sequence.

4. The hairpin ribozyme according to claim 1, which is a cis-form ribozyme which first self-cleaves upon activation.

5. The hairpin ribozyme according to claim 4, which exhibits a complex structure with an oligonucleotide as shown in general formula (I) or (II)



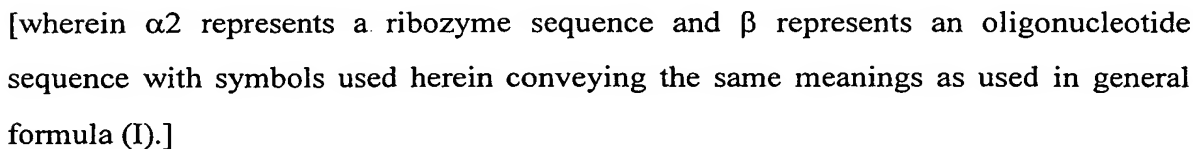
[wherein $\alpha 1$ represents a ribozyme sequence and β represents an oligonucleotide sequence:

in which U represents a uracil nucleotide, C represents a cytosine nucleotide, A represents an adenine nucleotide, and G represents a guanine nucleotide;

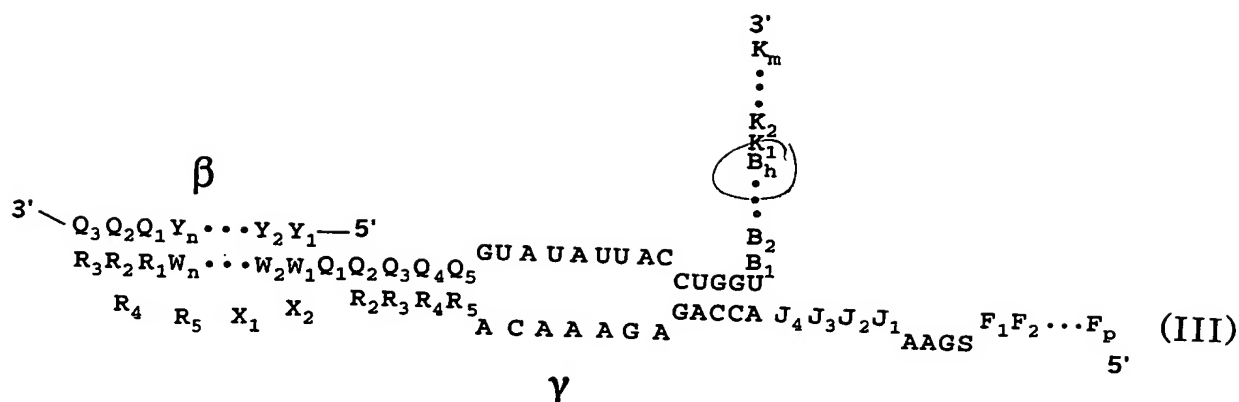
B1 to Bh, E1 to Ep, H1 to H4, Q1 to Q5, W1 to Wn, and X1 and X2, which may be the same or different, each represent any of a uracil nucleotide, an adenine nucleotide, a cytosine nucleotide, or a guanine nucleotide;

Year	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100
1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	

h is an integer from 3 to 20, n is an integer from 1 to 10, and p is an integer from 1 to 10.]



7. The hairpin ribozyme according to claim 6, which exhibits a complex structure with an oligonucleotide as shown in general formula (III)



[wherein γ represents a ribozyme sequence and β represents an oligonucleotide sequence:

B1 to Bh, F1 to Fp, J1 to J4, K1 to Km, Q1 to Q5, W1 to Wn, and X1 and X2, which may be the same or different, each represent any of a uracil nucleotide, an adenine nucleotide, a cytosine nucleotide, or a guanine nucleotide;

S represents an adenine nucleotide or a cytosine nucleotide; and

8. An isolated DNA encoding a ribonucleotide which constitutes the hairpin ribozyme according to claim 1.

10. A host cell into which the recombinant vector according to claim 9 has been introduced.

and an inactive ribozyme.

12. The method for activating a hairpin ribozyme according to claim 11, wherein one or more nucleotides in the oligonucleotide are 2'-O-methylated.

13. A method for detecting a target nucleotide sequence with the hairpin ribozyme according to claim 1.

14. The method for detecting according to claim 13, comprising detecting the presence of a target nucleotide sequence in a sample contained on a DNA chip.

15. A method for detecting a target nucleotide sequence, comprising detecting a fragment cleaved by the self-cleavage of the hairpin ribozyme according to claim 1.

16. The method for detecting according to claim 13, comprising detecting a cleaved fragment using a fluorochrome or a radioactive label.

17. A detection kit for a target nucleotide sequence in a sample, comprising the hairpin ribozyme according to claim 1.

18. A method for cleaving a ribonucleotide sequence, using the hairpin ribozyme according to claim 1.

19. The method for cleaving according to claim 18, wherein administration of the hairpin ribozyme according to claim 1 is carried out separately from that of the oligonucleotide.

20. The method for cleaving according to claim 18, wherein one or more nucleotides in the oligonucleotide are 2'-O-methylated.

21. A pharmaceutical composition comprising the hairpin ribozyme according to claim 1.